

Assessment of Potential Locations for Truck Rest Areas in Northern New Jersey and the Port District

**Stakeholders Group
Meeting #2—NJTPA Offices
November 28, 2006—10:30am to Noon**

Meeting Summary

Attendees

See attached attendance list. Because the Freight Initiatives Committee meeting preceded the Stakeholders Group Meeting it includes those attendees as well.

Project Status Update

John Hummer provided a brief status update on the project. John made note of the following progress and upcoming milestones:

- The study continues to be on track for February 2007 completion.
- The field data collection is complete, the industry interviews are nearly complete and the web survey will continue to operate through December 15.
- The consulting team has drafted a regional truck parking facilities database and is refining it for use by regional partners. The database will include facilities in the NJTPA region as well as those included in the NYMTC and ConnDOT studies.
- We are beginning the process of identifying areas for potential truck parking locations and will ultimately identify 4 sites (either new or expanded) for further exploration.
- There will be one final Stakeholders Group Meeting tentatively scheduled for the end of January at which time we intend to have draft recommendations for review.

Preliminary Web Survey Results

The consulting team provided a briefing of the preliminary results of the truck driver web survey. Due to some server complications the web site was down for a few days but approximately 50 surveys were completed as of November 22. The survey will extend to at least December 15, 2006. Some of the following preliminary results were shared with the Stakeholders:

When asked drivers' reasons for stopping

- 23%--Restroom
- 21%--Sleep

- 17%--Food
- 13%--Short Rest
- 12%--Waiting for Terminal/Warehouse Gate
- 10%--Fuel

When asked why finding truck parking is a problem

- 37%--Not enough parking at existing facilities
- 25%--No parking where I like to stop
- 22%--Parking time limits
- 15%--Not convenient to the highway

When asked what distance drivers are willing to travel for parking

- 38%--<1 mile
- 34%--1 to 3 miles
- 23%--3 to 5 miles
- 5%-->5 miles

When asked what Locations Typically Used

- 57%--Private Facilities
- 81%--Off of I-78 (57%) and I-80 (24%)

When asked of their preferred features of a new facility the top 10 include

1. Restrooms
2. Convenience to highway
3. Well-lit parking lot
4. Cleanliness
5. Safety
6. Extended parking time limits
7. Restaurant
8. Showers
9. Security presence
10. Idle reduction technology

Full survey results will be available at the January Stakeholders Group meeting.

Industry Interview Results

The consulting team also provided a briefing of the preliminary results of the trucking industry interviews. The team interviewed 20 companies and is waiting for return calls from others. Some of the following preliminary results were shared with the Stakeholders:

When asked if their drivers are short haul or long haul

- Both short and long haul (80%)
- Long haul only (20%)
- Short haul only (0%)

When asked if their drivers use northern NJ rest areas/truck stops

- Yes (65%)
- Quick stop (45%)
- Up to 3 hours (40%)
- Overnight (35%)

When asked if their drivers find parking difficult to locate

- Yes (65%)
- No (20%)

Reasons?

- Not enough at existing facilities
- Gaps in facilities

Suggested new locations?

- On all routes near NY state line
- NJ Port Area
- NJ Turnpike – all areas
- I-78 between NJ Turnpike and PA line
- I-80 between NJ Turnpike and PA line

Suggested amenities?

- Showers
- Restrooms
- Food
- Well-lighted parking lot

Most common complaints?

- Lack of / insufficient parking
- Parking spaces too small
- Safety / crime

Common Themes

- Stops should be simple, safe, and clean
- On highway highly preferable
- More stops near NY border
- Stops need more and larger parking spaces
- Truck parking shortage not limited to NJ

Full survey results will be available at the January Stakeholders Group meeting.

Site Evaluation Criteria

The revised draft site evaluation criteria for truck parking were provided to stakeholders and reviewed. Comments are still welcome on the criterion which will begin to be applied to specific sites in December. Categorization and weighting approaches may be applied in future criteria refinement. The chart below summarizes these criteria.

	Criterion	Description	Measures
1	Roadway segments where truck parking capacity does not meet demand	Based on the corridor truck parking demand methodology culled from the FHWA methodology	<ul style="list-style-type: none"> • Ratio of demand to capacity (H-M-L)
2	Locations convenient to carriers	Areas with close proximity to the highway system, warehouse and distribution centers, port facilities, etc.	<ul style="list-style-type: none"> • < 1 mile from an interstate or major arterial (Yes/No) • < 2 miles from a warehouse & distribution center or other major truck generator. (Yes/No) • Accessible to both directions of travel (Yes/No)
3	Current Land Use	Current use of land	<ul style="list-style-type: none"> • Current industrial, warehouse, or manufacturing land use (Yes/No) • Brownfield or other vacant land (Yes/No)
4	Adjacent Land Use	Current use of adjacent land	<ul style="list-style-type: none"> • Current industrial, warehouse, or manufacturing land use (Yes/No) • Brownfield or other vacant land (Yes/No)
5	Current Zoning	Used to differentiate incompatible current land uses from those that can be converted to truck parking facilities.	<ul style="list-style-type: none"> • Current industrial, warehouse, or manufacturing zoning (Yes/No) • Exclusionary restrictions or conditions (Yes/No)
6	Adjacent Zoning	Used to differentiate incompatible current land uses from those that	<ul style="list-style-type: none"> • Current industrial, warehouse, or manufacturing zoning (Yes/No)

	Criterion	Description	Measures
		can be compatible with or complimentary to truck parking facilities.	<ul style="list-style-type: none"> Exclusionary restrictions or conditions (Yes/No)
7	Parcel acreage/potential truck spaces	Acreage of the site	<ul style="list-style-type: none"> Ability to accommodate 50+ Parked trucks based upon buildable acreage. (Yes/No, Number able to accommodate)
8	Ability to provide basic amenities (rest rooms, vending machines, traveler information)	Accommodation of basic amenities while still providing the required 50+ parking spaces.	<ul style="list-style-type: none"> Rest rooms (Current-Yes/No, Ability-Yes/No) Vending machines (Current-Yes/No, Ability-Yes/No) Traveler information (Current-Yes/No, Ability-Yes/No)
9	Ability to provide enhanced driver services (e.g., showers, lodging, fitness centers, etc.)	Accommodation of enhanced amenities while still providing the required 50+ parking spaces and basic amenities.	<ul style="list-style-type: none"> Showers (Current-Yes/No, Ability-Yes/No) Lodging (Current-Yes/No, Ability-Yes/No) Fitness center (Current-Yes/No, Ability-Yes/No) Fast food services (Current-Yes/No, Ability-Yes/No) Sit down restaurant services (Current-Yes/No, Ability-Yes/No) Other (Current-Yes/No, Ability-Yes/No)
10	Ability to provide diesel/gas/alternative fuel facilities	Accommodation of diesel/gas/alternative fuel facilities while still providing the required 50+ parking spaces.	<ul style="list-style-type: none"> Diesel (Current-Yes/No, Ability-Yes/No) Gas (Current-Yes/No, Ability-Yes/No) Alternative fuel facilities (Current-Yes/No, Ability-Yes/No)
11	Ability to provide electric plug-ins/truck stop electrification (TSE)	Accommodation plug-ins/truck stop electrification (TSE) while still providing the required 50+ parking spaces.	<ul style="list-style-type: none"> Plug-ins/truck stop electrification (TSE) (Current-Yes/No, Ability-Yes/No)
12	Ability to provide communication services (e.g, Internet Wi-Fi, UPS/FedEx, Fax)	Accommodation of communication services while still providing the required 50+ parking spaces.	<ul style="list-style-type: none"> Internet Wi-Fi (Current-Yes/No, Ability-Yes/No) UPS/FedEx (Current-Yes/No, Ability-Yes/No) Fax (Current-Yes/No, Ability-Yes/No)
13	Ability to provide utilities, electric, water, sewer	Existing (or ability to provide) utilities on site	<ul style="list-style-type: none"> Electric (Current-Yes/No, Ability-Yes/No) Water (Current-Yes/No, Ability-Yes/No) Sewer (Current-Yes/No, Ability-Yes/No)
14	Ability to provide vehicle services (scales, wash, repair, etc.)	Accommodation of vehicle services while still providing the required 50+ parking spaces.	<ul style="list-style-type: none"> Scales (Current-Yes/No, Ability-Yes/No) Wash (Current-Yes/No, Ability-Yes/No) Repair (Current-Yes/No, Ability-Yes/No)
15	Environmental Factors	The presence of environmentally sensitive impediments to a parking facility	<ul style="list-style-type: none"> Wetlands (Yes/No) Brownfield (Yes/No) Endangered or Protected species (Yes/No)
16	Cost of Real Estate	The price for an acre of land	<ul style="list-style-type: none"> Average cost of land per acre in municipality

	Criterion	Description	Measures
17	Level of Safety/Security Needs	Security needs for the facility	<ul style="list-style-type: none"> Crime rate in municipality Perimeter miles of site (for fencing) Site management (on site security or public police)
18	Other/Site Specific		<ul style="list-style-type: none">

Feedback received through December is welcome.

Analytical Method and Preliminary Assessment of Truck Parking Locations

Study Review

The nationally accepted methodology for assessing truck parking demand on larger geographic scales (regional-based vs. facility-based) is outlined in a report by the Federal Highway Administration (FHWA) titled: Study of Adequacy of Commercial Truck Parking Demand (FHWA-RD-01-158, March 2002). This methodology is used to estimate truck parking demand based on a number of factors, including:

- Truck volumes
- Average travel speeds
- Short-haul/long-haul trip relationship
- Average short-term parking (fraction of hour)
- Long-haul driving interval (based on HOS)
- Estimated loading/unloading time
- Seasonal/daily peaking factors

For this study, the FHWA methodology has been applied for the region on a corridor-by-corridor basis and has been refined to capture some unique attributes of the NJTPA region. Some of the parameters used in the FHWA methodology have been adjusted/refined based on detailed information that has been collected over a 24-hour period at a group of sample truck parking facilities in the NJTPA region, and during peak periods (primarily overnight) at all existing facilities in the region, along the shoulders of major highways, and in key port/terminal areas and warehouse districts. Peak parking activity at facilities shown by highway corridor and for all shoulder/roadway parking locations was shown at the first Stakeholders Group meeting and included in the project summary for that meeting. This information has been used to develop a comprehensive profile of parking activity and calibrate the results of the FHWA truck parking demand model.

Final Results of Data Collection/Refinement

An extensive data collection program was undertaken during the summer of 2006. Data collection focused on three key areas: 1) 24-hour profiles of truck parking activity at eight sample facilities on various corridors in the region (parking duration, truck entries vs. mainline volumes, etc.); 2) documentation of peak overnight parking activity at all facilities in the NJTPA region and at facilities in Rockland County, NY and eastern Pennsylvania; and 3) documentation of parking activity along limited-access highway shoulders during peak overnight hours, and along public streets in port terminal and warehouse areas during late evening and pre-dawn periods.

Facilities surveyed as part of Item #1 above include the following:

- Grover Cleveland Service Area (northbound NJ Turnpike)
- Thomas Edison Service Area (southbound NJ Turnpike)
- rest area on northbound I-287 in Harding Township
- wayside parking areas on both sides of I-80 near milepost 21 in Allamuchy
- wayside parking areas on both sides of I-78 near Exit 7 in Bloomsbury
- off-highway truck stop on Route NJ-173 adjacent to Exit 7 of I-78

Data for the I-78 parking areas were not used for the regional profile, since this information was collected specifically to assess the relationship between parking areas along a regional highway and an adjacent off-highway truck stop. Using the results at these two locations would likely have resulted in an over-sampling of activity at wayside parking areas (two locations on I-80 were already included in this group).

A total of nearly **5,000** trucks were counted entering these six facilities during the 24-hour data collection process. Detailed parking duration characteristics (i.e., start and end times) were obtained for about **980** of them. The breakdown of regional truck parking duration is as follows:

Time Interval	Number	Pct.
0-15 minutes	1,926	39%
16-30 minutes	863	17%
31-45 minutes	461	9%
46-60 minutes	511	10%
61-90 minutes	313	6%
91-120 minutes	139	3%
2-3 hours	164	3%
3-4 hours	76	2%
4-5 hours	104	2%
5-6 hours	87	2%
6+ hours	350	7%
TOTALS	4,994	100%

Average (mean) parking duration for the entire region is **82 minutes**. Median parking duration – which is used in the analytical process to model truck parking demand – is **25 minutes**. There is a wide discrepancy between the mean and median values because the mean is heavily skewed by long parking durations that occur relatively infrequently. The 85th percentile value for parking duration is **131 minutes** (2 hours, 11 minutes). The longest parking interval recorded during the 24-hour day was **16 hours, 50 minutes**.

The peak level of truck parking activity is a function of three different factors:

- Truck parking volume (i.e., trucks entering facilities)
- Truck parking duration
- “Overlap” (i.e., net accumulation) of parking demand within a period of time

Peak parking demand in the NJTPA region occurs between 8:00 PM and 4:00 AM. **About 7.5% to 8.4% of the total trucks parked in the region are parked during any given hour during this period of time.**

A summary of observed peak parking activity in NJTPA region and adjoining areas in upstate New York and Pennsylvania is as follows (this information was provided to the Stakeholders Group at the last meeting):

- 1,369 trucks parked in marked spaces at existing facilities (68% of total)
- 359 trucks parked outside marked spaces at existing facilities (18%)
- 199 trucks parked along shoulders of limited-access highways (10%)
- 94 trucks parked along roadways in terminal/warehouse areas (4%)

Corridor-Level Parking Demand based on FHWA Methodology

The FHWA methodology was applied to major roadways in the NJTPA region, including all interstate highways, Federal and state highways in the heart of the port district, and key Federal/state highways outside the region. NJDOT data were used as the basis for all daily traffic volumes and roadway segment lengths, and truck percentages were applied using the corridor-based analytical process used in the Comprehensive Port Improvement Plan (CPIP). Truck percentages ranged from 3% on secondary routes in the outlying areas to 37% in the immediate vicinity of the port/rail terminal core.

Posted speed limits used from NJDOT to estimate travel times, with average/interpolation calculations done as needed for long roadway segments. The FHWA methodology uses a number of default parameters in the absence of more detailed information, but the study team was able to improve on these because various agencies in the NJTPA region have a wealth of data available through their existing data collection processes. Parameters refined for this effort include the following:

- Default seasonal adjustment factor of 1.15 was replaced by values ranging from 1.07 to 1.17, using data from various toll facilities in the region.

- Median parking duration of 25 minutes was used, based on data collected above.
- Default “Urban” long-haul/short-haul ratio of 64%-36% replaced by estimated 12%-88% split for this study, to reflect the “destination market” characteristics of the NJTPA region.

Major corridors defined for the NJTPA region are as follows:

Corridor #	Direction	Description
1	N-S	NJ Turnpike (I-95) south of I-287
2	N-S	NJ Turnpike (I-95) between I-287 and I-78
3	N-S	I-95 between I-78 and George Washington Br.
4	E-W	I-78 between I-287 and NJ Turnpike (I-95)
5	E-W	I-78 between Pennsylvania and I-287
6	E-W	I-80 between I-287 and NJ Turnpike (I-95)
7	E-W	I-80 between Pennsylvania and I-287
8	N-S	I-287 between I-78 and I-80
9	N-S	I-287 between I-80 and New York State Line
10	NW-SE	Other roadways north of I-80 and west of I-287
11	NW-SE	Other roadways east of I-95 and south of Raritan River

The total peak truck parking demand for the NJTPA region – as calculated using a preliminary application of the FHWA model – is **2,223 trucks**.

Based on this methodology, the corridors with the heaviest computed parking shortfall are as follows:

Corridor/Direction	Description
4-E	I-78 EB between I-287 and NJ Turnpike (I-95)
4-W	I-78 WB between NJ Turnpike (I-95) and I-287
1-N	NJ Turnpike (I-95) NB south of I-287
3-N	I-95 NB between I-78 and George Washington Br.
1-S	NJ Turnpike (I-95) SB south of I-287
6-E	I-80 EB between I-287 and NJ Turnpike (I-95)
6-W	I-80 WB between NJ Turnpike (I-95) and I-287
8-S	I-287 SB between I-80 and I-78

Truck Parking Communications Strategy

The substantial communication dimensions and challenges relating to constructively addressing the truck parking issue were foreseen from the study’s inception and will soon need to be considered. The first draft of a communications strategy was presented to the stakeholders.

While this early draft communication strategy is at present a stand-alone document, it is anticipated that given the fact that an effective and transparent public information and communication strategy is essential, that this document (in its final form) will be incorporated as a standing chapter in the final study.

At the outset, it is critically important to note that a public information and communications strategy has several facets or segments including but not limited to:

- The Trucking Industry
- Municipal Government and Public Officials
- The General Public
- State and Federal Agencies
- Other State DOT's and MPOs

The team will progressively advance a structured dialogue that will result in a recommended public information and communications strategy.

Adjournment

There will be one final Stakeholders Group Meeting tentatively scheduled for the end of January at which time we intend to have draft recommendations for review. John Hummer thanked the stakeholders for their attendance and encouraged them to continue to participate throughout the study process. The meeting was adjourned at 12:45 pm.

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